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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/705,381

11/10/2003

Hsing Chen

2011146

4329

7590

09/27/2004

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EXAMINER

BAUMEISTER, BRADLEY W

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/705,381

Applicant(s)

CHEN, HSING

Examiner

B. William Baumeister

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. A substitute specification excluding the claims is required pursuant to 37 CFR 1.125(a) because it is replete with translational and grammatical errors.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Objections

2. Claim 4 is objected to because of the following informalities: the recited CIE coordinates (1) include at least one typographical error (see the first coordinate); (2) do not correspond to the coordinates depicted in FIG 4 (e.g., the first two coordinates); and (3) do not correspond solely to pink hues (e.g., the second coordinate). Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, insofar as definite 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakano et al. '341 (filed 9/11/02, effective filing date 8/19/02 per the USPTO's PALM database).

a. Sakano discloses a GaN-based LED that emits in the range of 400–530 nm or more preferably 420-490 nm or even more preferably from 450 to 475 nm (i.e., a blue LED chip) (e.g., [0095]). The chip is encapsulated with a resin that includes a YAG:Ce-based fluorescent powder that emits at around 580-700 nm (yellow) (e.g., [0127]). Additional fluorescent powder that emits red light may also be employed in order to emit an intermediate color such as pink ([0131]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2815

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakano et al. '341 as applied to the claims above, and further in view of the Phosphor Handbook, pages 168-170, 389-394 and 430.

- a. Sakano does not provide any examples of which specific conventional red-emitting phosphors may be employed to achieve the desired pink light.
- b. The Phosphor Handbook teaches that $3.5\text{MgO} \cdot 0.5\text{MgF}_2 \cdot \text{GeO}_2\text{:Mn}$ was a conventional, practically used phosphor known to have a peak emission band at about 620 to 700 nm and strong absorption bands in the visible to near-UV (i.e., blue) region (pages 168-169; 394, Table 11 and 430, FIG 57). Also see e.g., Table 8 on page 170, setting forth characteristics of the conventional $\text{Mg}_6\text{As}_2\text{O}_{11}\text{:Mn}$ phosphor.
- c. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed either of these red-emitting phosphors in the Sakano device to emit pink light because these conventional phosphors have the emission and absorption characteristics required for the parameters set forth by Sakano.

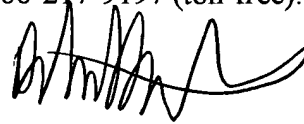
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. William Baumeister whose telephone number is (571) 272-1722. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2815

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



B. William Baumeister
Primary Examiner
Art Unit 2815

BAUMEISTER
PRIMARY EXAMINER

September 21, 2004